Raman spectra of...

1048 - 1062, 1240 - 1290, 1320 - 1325, 1364 - 1380, 1570 - 1577, and 1605 - 1622 cm^{-1}, independently of the nature and position of the substituent. Compounds (a) and (b) showed very intense lines at 745 cm^{-1}; in (c) this line was at 735 cm^{-1}; in (d) at 672 cm^{-1}; in (e) it was absent. The intensity of this line decreased with increasing degree of substitution. These frequencies are ascribed to the out-of-plane deformation vibrations of the aromatic C-H bonds. The characteristic lines and their vibrations were found to be practically independent of the position and chain-length of the alkyl group. The help of R. P. Shibayeva and N. F. Karpenko in the preparation of alkylated benzenes is acknowledged. There are 2 tables.

ASSOCIATION: Kafedra organicheskoy khimii (Department of Organic Chemistry)

SUBMITTED: January 11, 1961

Card 2/2

IUR'YEV, Yu.K.; MEZENTSOVA, N.N.; TRESHCHOVA, Ye.G.

Raman spectra of 2-propyl-, 2-cyclopropyl-, and 2-propenylselenophene. Vest.Mosk. un. Ser.2:khim. 17 no.1:60-62 Ja-F '62. (MIRA 15:1)

1. Moskovskiy gosudarstvennyy universitet, kafedra organicheskoy khimii i laboratoriya molekulyarnoy spektroskopii.
(Selenophene—Spectra)

TRESHCHOVA, Ye.G.; PANCHENKO, Yu.N.; VASIL'YEV, N.I.; KUZ'MIN, M.G.; SHABAROV, Yu.S.; LEVINA, R. Ya.

Raman spectra of various classes of hydrocarbons. Part 6: Raman spectra of some arylcyclobutanes. Opt. i spektr. 8 no.3:371-375 Mr '60. (MIRA 14:5)

(Cyclobutane—Spectra)

LEVINA, R. Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropanes and cyclobutanes. Part 18: ρ-Cyclopropylcumene and ρ-isopropenylcumene. Zhur. ob. khim. 31 no.4:1185-1190 Ap '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Benzene)

5(3)

AUTHORS: Levina, R. Ya., Baukh, I., Kaykaris, P. A., Treshchova, Ye. G.

SOV/79-29-9-29/76

TITLE: Synthesis of Hydrocarbons. LXXI. Synthesis of the Dineoalkyls $C_{12}H_{26}$- $C_{14}H_{30}$

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2945-2950 (USSR)

ABSTRACT: The present paper deals with the synthesis of the dineoalkyls C_{12}- C_{14} with a different position of the quaternary hydrocarbons in the chain, i.e. 3,3,6,6-tetramethyl alkanes and 4,4,7,7-tetramethyl decane (dineoheptyl) according to the method of synthesizing dineoalkyls recently developed by the authors (Ref 1) (by double Grignard-Wuertz reaction). The compounds (II) (10% yield), i.e. 2,5,5-trimethyl heptene-2 and 2,5,5-trimethyl octene-2 (Scheme 2) were obtained by the reaction of the primary hydrobromide of isoprene (I) with tertiary amyl- and, accordingly, tertiary hexyl magnesium chloride. The Raman spectra of the synthesized alkenes were characteristic of trisubstituted ethylenes. The 2,2,5-trimethyl heptene-2 was also obtained by partial catalytic hydrogenation of 2,5,5-trimethyl heptadiene-2,6. This diene hydrocarbon

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contains the groups of the monosubstituted ($-CH=CH_2$) and trisubstituted ($>C=CH-$) ethylene, which according to S. V. Lebedev (Ref 2) ought to be hydrogenated at a different rate. The hydrogenation of this heptadiene in fact occurs according to scheme 3 at constant rate until two hydrogen atoms are added per 1 mol diene. Constants and Raman spectra of the alkene obtained corresponded to the constants and the Raman spectra of 2,5,5-trimethyl heptene-2 which was synthesized according to Grignard-Wuertz.By HCl the 2,5,5-trimethyl alkenes-2 (II) were then transformed into the saturated chlorides (III) (93 and 75% yield), which in turn were transformed into dineoalkyls (IV) (Scheme 4) by reaction with organomagnesium compounds in the presence of $HgCl_2$. These dineoalkyls were separated from the initial alkenes (50-55%) by fractional distillation. The yields of dineoalkyl purified by further distillation and chromatography on silica gel amounted to 10-32%, calculated for the tertiary chlorides (III) introduced into the Grignard-Wuertz reaction. Thus,

Synthesis of Hydrocarbons, LXXI. Synthesis of the Dineoalkyls $C_{12}H_{26}$- $C_{14}H_{30}$

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3,3,6,6-tetramethyl octane and the hitherto unknown 3,3,6,6-trimethyl nonane, 2,3,3,6,6-pentamethyl octane, and 4,4,7,7-tetramethyl decane were synthesized. There are 2 tables and 9 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 17, 1958

Card 3/3

LEVINA, R. Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; TRESHCHOVA, Ye. G.

Cyclopropanes and cyclobutanes. Part 17: Reduction of arylcyclopropanes by metals and methyl alcohol in liquid ammonia. Zhur. ob. khim. 31 no.3:829-836 Mr '61. (MIRA 14:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Cyclopropane)

SHABAROV, Yu.S.; LEVINA, R.Ya.; POTAPOV, V.K.; OSIPOV, A.M.; TRESHCHOVA, Ye.G.

Cyclopropanes and cyclobutanes. Part 14: Phenylcyclopropanes with substituents in the para positions of the benzene ring. Zhur. ob. khim. 30 no.12:3874-3876 D '60. (MIRA 13:12)

1. Moskovskiy gosudarstvennyy universitet.
(Benzene)

PENTIN, Yu.A.; PANCHENKO, Yu.N.; TRESHCHOVA, Ye.G.; SHARIPOV, Z.

Study of the infrared absorption spectra and Raman spectra of dipropenyl and diallyl in the liquid and solid phase in relation to cis-trans isomerism. Opt. i spektr. 10 no. 1:55-62 Ja '61. (MIRA 14:1)

(Hexadiene--Spectra)

TRESHCHOVA, Ye.G.; TATEVSKIY, V.M.; DAUKSHAS, V.K.; LEVINA, R.Ya.

Raman spectra of hydrocarbons of various classes. Part 7: Di-tert. alkylmethanes C_{10}-C_{17}, Branched alkanes with two quaternary carbon atoms separated by a methylene group. Opt. i spektr. 10 no. 1:63-68 Ja '61. (MIRA 14:1)
(Paraffins--Spectra)

87525

5 5500

S/079/60/030/012/005/027
B001/B064

AUTHORS: Shabarov, Yu. S., Levina, R. Ya., Potapov, V. K., Osipov, A. M., and Treshchova, Ye. G.

TITLE: Cyclopropanes and Cyclobutanes. XIV. Phenyl Cyclopropanes With Substituents in the Para Position of the Benzene Cycle

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12, pp. 3874-3876

TEXT: In previous papers (Refs. 1-4) the authors reported on the effect of the nature of aryl radicals upon the reactivity of the three-membered cycle linked with it. Thus, it was found that polymerizability strongly increases under the action of $AlCl_3$ in the following order: phenyl cyclopropane < p-tolyl cyclopropane < p-anisyl cyclopropane (Ref. 2). The three-membered cycle which opens readily in phenyl cyclopropane (Ref. 3), p-tolyl cyclopropane, p-anisyl cyclopropane (Ref. 4) under the action of mercury salts, is stable in p-nitrophenyl cyclopropane (Ref. 1). To render these observations more complete, it is necessary to develop a method of synthesizing phenyl cyclopropane with various substituents in the benzene cycle. p-aminophenyl cyclopropane which could be easily obtained by

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Cyclopropanes and Cyclobutanes. XIV. Phenyl Cyclopropanes With Substituents in the Para Position of the Benzene Cycle

S/079/60/030/012/005/027
B001/B064

nitrating phenyl cyclopropane, with subsequent reduction of the nitro group to the amino group (Ref. 1), served as the initial product. The replacement of the latter in p-amino phenyl cyclopropane by other substituents was carried out by diazotization. Thus, p-hydroxy-p-chloro- and p-bromophenyl cyclopropane results:

$$p\text{-}H_2N\text{-}C_6H_4\text{-}CH\text{-}CH_2 \longrightarrow p\text{-}X\text{-}C_6H_4\text{-}CH\text{-}CH\text{-}CH_2 \quad (X = OH,\ Cl,\ Br).$$

p-aminophenyl cyclopropane was also used for synthesizing p-dimethyl amino phenyl cyclopropane:

$$p\text{-}H_2N\text{-}C_6H_4\text{-}CH\text{-}CH_2 \xrightarrow[\text{benzene, } 80^{\circ}C]{(CH_3O)_2SO_2} (CH_3)_2N\text{-}C_6H_4\text{-}CH\text{-}CH_2$$

A study of the Raman spectra of the phenyl cyclopropanes obtained showed that no unsaturated compounds had been added; intensive frequencies appeared at 1600 cm^{-1}, which are characteristic of the aromatic cycle, as well as bands (1200-1260 cm^{-1}) indicating the presence of the phenyl cyclopropane molecule (Refs. 5, 6). The ultraviolet absorption curves of aryl cyclopropanes (Diagrams 1 and 2) showed the same character as those of p-tolyl

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Cyclopropanes and Cyclobutanes. XIV. Phenyl Cyclopropanes With Substituents in the Para Position of the Benzene Cycle

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B001/B064

cyclopropane (Ref. 5) and p-aminophenyl cyclopropane (Ref. 1). There are 2 figures and 6 references: 5 Soviet and 1 French.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 14, 1960

Card 3/3

TOPCHIYEVA, K.V.; ZEL'KOVICH, I.A.; TRESHCHOVA, Ye.G.

Effect of hydrogen on the thermal and catalytic cracking of n-octane. Vest.Mosk.un.Ser.mat.,mekh.,astron.,fiz.,khim. no.6:164-170 '59. (MIRA 13:10)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.
(Cracking process) (Octane)

S/051/61/010/001/005/017
E201/E491

AUTHORS: Treshchova, Ye.G., Tatevskiy, V.M., Daukshas, V.K. and Levina, R.Ya.

TITLE: The Raman Spectra of Various Types of Hydrocarbons VII. Ditertiaryalkylmethanes C_{10} - C_{17} - Branched Alkanes With Two Quaternary Carbon Atoms Separated by a Methylene Group

PERIODICAL: Optika i spektroskopiya, 1961, Vol.10, No.1, pp.63-68

TEXT: Continuing earlier work (Ref.1 to 3) on vibrational spectra of higher alkanes, the authors studied the following C_{10} - C_{17} hydrocarbons containing quaternary and tertiary carbon atoms (ditertiaryalkylmethanes): 3,3,5,5-tetramethylheptane, 4,4,6,6-tetramethylnonane, 5,5,7,7-tetramethylundecane, 2,2,4,4-tetramethylhexane, 2,2,4,4-tetramethylheptane, 2,4,4,6,6,8-hexamethylnonane and 2,5,5,7,7,10-hexamethylundecane. The methods of preparing these compounds were given in earlier work (Ref.4 to 6). Some physical and chemical properties of ditertiaryalkylmethanes are listed in Table 1. The Raman spectra were recorded with a three-prism spectrograph with a

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S/051/61/010/001/005/017
E201/E491

The Raman Spectra of Various Types of Hydrocarbons VII. Ditertiaryalkylmethanes C_{10} - C_{17} - Branched Alkanes With Two Quaternary Carbon Atoms Separated by a Methylene Group

photomultiplier ФЭУ-17 (FEU-17). The measurements and calculations were carried out in the same way as in earlier work (Ref.7). The intensity of the 802 cm^{-1} line of cyclohexane was used as a standard; its dependence on the monochromator exit slit is shown in Fig.2. Table 2 lists the frequencies and intensities of the Raman lines in the region 150 to 1600 cm^{-1}. It was found that the characteristics of quaternary carbon atoms and the group with a tertiary carbon atom at the end of the chain, established for lower hydrocarbons, applied also to paraffin hydrocarbons up to $C_{17}H_{36}$. The characteristics of complex branching with two quaternary carbon atoms, separated by CH_2, were present irrespective of the length of the chain and the presence of simple branching. The presence of complexes with quaternary and tertiary carbons did not interfere with the characteristics of separate groups. There are 1 figure, 2 tables and 10 references: 9 Soviet and 1 non-Soviet.

SUBMITTED: December 21, 1959

Card 2/2

LEVINA, R.Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropylmesitylene and p-cyclopropylcumene. Zhur.ob. khim. 30 no.7:2435-2436 Jl '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet.
(Mesitylene) (Cumene)

69840

5.3100

S/051/60/008/03/015/038
E201/E191

AUTHORS: Treshchova, Ye.G., Panchenko, Yu.N., Vasil'yev, N.I., Kus'min, M.G., Shabarov, Yu.S., and Levina, R.Ya.

TITLE: Raman Spectra of Hydrocarbons of Various Classes. VI. The Raman Spectra of Some Arylcyclobutanes

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3, pp 371-375 (USSR)

ABSTRACT: The authors investigated the Raman spectra of phenylcyclobutane and of the following arylcyclobutanes: m-tolylcyclobutane, n-tolylcyclobutane, o-anisylcyclobutane, n-anisylcyclobutane; for the sake of comparison the Raman spectra of phenylcyclopropane and n-tolylcyclopropane were also obtained. The apparatus, the experimental technique and the methods of calculation were the same as in earlier work (Ref 6). The results are given in Tables 2-4, and the properties (such as the melting point, refractive index, etc) of the four arylcyclobutanes and of phenylcyclobutane are listed in Table 1. The Raman spectra of all four arylcyclobutanes included frequencies characteristic of the appropriate mono- and dialkylbenzenes and alkykcyclobutanes. The intensity of the Raman lines characteristic of the

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S/051/60/008/03/015/038
E201/E191

Raman Spectra of Hydrocarbons of Various Classes. VI. The Raman Spectra of Some Arylcyclobutanes

four-member cycle and of the benzene ring (lines in the region ~1000-1600 cm^{-1}) is greater in the spectra of arylcyclobutanes than the intensities of the corresponding lines in spectra of alkylcyclobutanes and alkylbenzenes. This behaviour of the intensities was not observed in the case of lines at ~600-800 cm^{-1}, which are characteristic of the benzene ring. There are 4 tables and 7 Soviet references.

Card 2/2

SUBMITTED: July 3, 1959

69791 S/055/59/000/06/20/027
B004/B002

5.3300

AUTHORS: Topchiyeva, K. V., Zen'kovich, I. A., Treshchova, Ye. G.

TITLE: The Influence of Hydrogen on Thermal and Catalytic Cracking of n-Octane

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 6, pp. 164 - 170

TEXT: For their investigation, the authors partly used a synthetic aluminosilicate (30% Al_2O_3 + 70% SiO_2) and partly a commercial aluminosilicate catalyst. The range of the experimental temperature was 450 - 550°. The mixture obtained from hydrogen and cracking products was analyzed, its density was determined, and Raman spectra were taken from the liquid products. Preliminary experiments showed that besides catalytic cracking, also thermal cracking took place (Fig. 1). Therefore, the total yield of cracking and the yield of thermal cracking were determined and from the difference, also the yield of catalytic cracking. The yield of thermal cracking decreases with an increasing flow rate of octane, while that of catalytic cracking remains unchanged, namely 8%. The yield of thermal cracking was above all dependent on the experimental apparatus

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The Influence of Hydrogen on Thermal and Catalytic Cracking of n-Octane

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B004/B002

(Table 1, Fig.2). The reaction furnace No. 1 used first had too much of lost space (gaps not filled by the catalyst) in which thermal cracking took place due to overheating. By using reaction furnace No. 2 thermal cracking of octane could be reduced to about one half. Table 2 and Fig. 3 give the results of the reaction after the addition of hydrogen and nitrogen. Hydrogen increases the yield of thermal cracking by 6%, and nitrogen by 3%. Fig. 4 shows that the yield of thermal cracking at 500° increases up to a constant value if the molecular ratio of H_2 : C_8H_{18} is increased. Fig. 5 shows the same result at 530°. The yield of catalytic cracking was not affected by hydrogen. Table 3 gives the analyses of the cracking products. In the presence of hydrogen, isomerization of n-octane set in. At 500° 5% of 3-methylheptane was obtained and at 550° 10%. The authors mentioned B. T. Abayeva (Ref. 4). There are 5 figures, 3 tables, and 11 references, 6 of which are Soviet.

ASSOCIATION: Kafedra fizicheskoy khimii (Chair of Physical Chemistry)

SUBMITTED: February 25, 1959

Card 2/2

SOV/79-30-3-27/69

AUTHORS: Levina, R. Ya., [illegible], V. N., Gershtein, P. A., Treshchova, Ye. G.

TITLE: Cyclopropanes and Cyclobutanes. X. Acylation of Cyclopropanes

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 868-875 (USSR)

ABSTRACT: The behavior of the cyclopropane ring in phenylcyclopropane, an acylation with acetic anhydride in the presence of phosphoric acid, was studied. The reaction proceeds through isomerization of cyclopropanes into alkenes, which on further acylation yield an unsaturated ketone, 2-benzylidenbutanone (yield 36.5%), mp 36°. C_6H_5 [illegible] $\cdot C_6H_5CH\text{—}CH\text{—}CH_2 \xrightarrow[(H_3PO_4)]{CH_3COOH} C_6H_5CH\text{—}CH\text{—}CH\text{—}CH_3$ (CH_3).

$$\left[C_6H_5CH\text{—}CH\text{—}COCH_3 \;(OCOCH_3,\ CH_3)\right] \xrightarrow{CH_3COOH} C_6H_5\text{—}CH\text{=}C\text{—}COCH_3\ (CH_3)$$

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All other cyclopropanes behave similarly. The structure of the prepared 2-benzylidenbutanone was confirmed by parallel synthesis.

Isomerization of phenylcyclopropane and 1,1,2,2-tetramethylcyclopropane in acetic anhydride in the presence of phosphoric acid yields propenylbenzene and 2,2,3-trimethylbutene, bp 162° (745 mm), n_D^{20} 1.4530, respectively. This constitutes a heterolytic cleavage of the cyclopropane ring.

Cyclopropanes and Cyclobutanes. X. Acylation of Cyclopropanes

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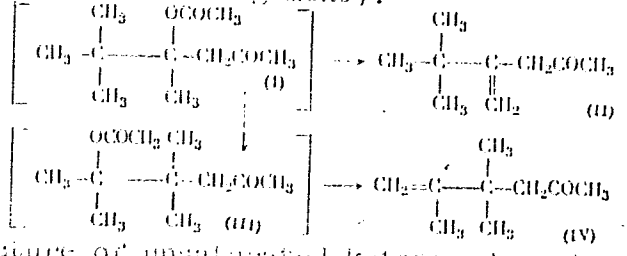
SOV/79-30-3-27/69

Acylation of 1,1,2,2-tetramethylcyclopropane or 2,2,3-trimethylbutene yields a β,γ-unsaturated ketone, 2,2-dimethyl-3-methylenehexan-5-one, which is formed from the intermediate acetoxyketone by elimination of an acetic acid molecule (without retropinacolone rearrangement).



The structure of unsaturated ketones formed on acylation of phenylcyclopropane and 1,1,2,2-tetramethylcyclopropane was confirmed by absorption spectra of their 2,4-dinitrophenylhydrazones, and by comparison of their properties with those of authentic samples. There are 12 references, 6

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Cyclopropanes and Cyclobutanes. X.
Acylation of Cyclopropanes

78273
SOV/79-30-3-27/69

Soviet, 2 U.S., 2 U.K., 1 French, 1 German. The U.S. and U.K. references are: Hart, H., Curtis, O. E., Jr., J. Am. Chem. Soc., 79, 931 (1957); Sukh, Dev, Chem. and Ind., 1071 (1954); Hartough, H., Kosak, A., J. Am. Chem. Soc., 69, 3093 (1947); Perkin, W. H., J. Chem. Soc., 69, 1028 (1896).

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: March 31, 1959

Card 4/4

SOV/51-7-3-4/21

AUTHORS: Kesler, Kh., Pentin, Yu.A., Treshchova, Ye.G. and Tatevskiy, V.M.

TITLE: Investigation of the Infrared Absorption Spectra of Hydrocarbons at Various Temperatures Both in the Liquid and Solid Phases.

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 3, pp 301-310 (USSR)

ABSTRACT: The paper reports a study of the infrared absorption spectra of nine hydrocarbons at temperatures from room temperature (liquid phase) and at low temperatures (solid phase). The study was undertaken to find out the changes in the spectra which occur on solidification. The hydrocarbons studied were normal alkanes (n-heptane, n-octane), branched alkanes (3-methylheptane, 2,3-dimethylheptane, 2,4-dimethylpentane, 2,5-dimethylhexane, 2,2,5,5-tetramethylhexane) and branched alkenes (2-methylheptene-2, 3,3-dimethylheptene-1). All these hydrocarbons were prepared and their properties determined in outside laboratories (acknowledgments are made to Prof. R. Ya. Levina and to A.V. Iogansen in this connection). Table 1 gives the degree of purity, the melting and crystallization points and the refractive index at 20°C (n_D^{20}) of the nine hydrocarbons listed above. The infrared spectra were recorded in the region from 700 to 1800 cm^{-1} by means of a two-beam infrared spectrometer IKS-2 with a NaCl prism. The optical slit width was 7-10 cm^{-1}.

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Investigation of the Infrared Absorption Spectra of Hydrocarbons at Various Temperatures Both in the Liquid and Solid Phases SOV/51-7-3-4/21

For liquids, cells with effective layer thickness from 0.03 to 0.48 mm were used. At low temperatures a special cell was employed; its construction ensured the constancy of the layer thickness of a liquid or solid in it. Measurements were carried out at temperatures from +20°C to -172°C. In order to obtain good crystals and to avoid vitrification, the hydrocarbons were cooled slowly. Figs 1-3 show absorption spectra of the nine hydrocarbons at various temperatures. Tables 2-4 give the observed absorption maxima for the liquid and solid phases. The results obtained show that in the case of 2,4-dimethylpentane and 2,5-dimethylhexane only one (the most symmetrical) isomer exists in the crystal phase, but more than one rotational isomer is present in the liquid phase. The authors suggest that only those substances crystallize out which have one rotational isomer of sufficiently high symmetry necessary to form a correct molecular crystal lattice. There are 3 figures, 4 tables and 10 references, 3 of which are Soviet and 7 English.

SUBMITTED: November 26, 1958

Card 2/2

TRESHCHOVA, Ye. G.

V. M. Tatevskiy, Yu. A. Pentin, Ye. G. Treshchova, and Kh. Kesler, "Rotational Isomerism and the Energy of the Formation of Hydrocarbons."

report presented at the Symposium on Concepts of Conformation in Organic Chemistry which took place in Moscow at the IOKh AN SSSR (Institute of Organic Chemistry, AS USSR) from September 30 to October 2, 1958.

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, No. 3, 561-564.

LEVINA, R.Ya.; KAYKARIS, P.A.; SIMOLIN, A.V.; TRESHCHOVA, Ye.G.

Synthesis of hydrocarbons. Part 66: C_{11} - C_{16} hydrocarbons with two adjacent quaternary carbon atoms. Zhur.ob.khim. 28 no.9:2309-2314 S '58. (MIRA 11:11)

1. Moskovskiy gosudarstvennyy universitet.
(Hydrocarbons)

SOV/51-5-5-9/23

AUTHORS: Treshchova, Ye.G., Tatevskiy, V.M., Skvarchenko, V.R. and Lovina, R.Ya.

TITLE: Raman Scattering Spectra of Hydrocarbons of Various Types. (Spektry kombinatsionnogo rasseyaniya uglevodorodov razlichnykh klassov). V. Raman Scattering Spectra of Certain Bi- and Tri-Cyclic Diene Hydrocarbons (V. Spektry kombinatsionnogo rasseyaniya nekotorykh bi- i tritsiklicheskikh diyenovykh uglevodorodov).

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 5, pp 553-560 (USSR)

ABSTRACT: The Raman spectra of the following bi-cyclic diene hydrocarbons with isolated and conjugated bonds were obtained: 2,2'- and 1,1'-dicyclohexenyl, 2,2'- and 1,1'-dicyclopentenyl, and dicyclopentadiene. 2,2'-dicyclohexenyl and 2,2'-dicyclopentenyl were synthesized by the action of Mg on 3-chlorcyclohexene-1 and 3-chlorcyclopentene-1, respectively. 1,1'-dicyclohexenyl and 1,1'-dicyclopentenyl were obtained by de-hydration of the corresponding pinacols (pinacones). Dicyclopen-adiene of technical grade was purified by double washing with a concentrated alkaline solution, by washing with water, drying and vacuum distillation. The boiling point, vapour pressure, refractive index and density at 20°C, etc., are given for all the five hydrocarbons in Table 1. The

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Raman Scattering Spectra of Hydrocarbons of Various Types. V. Raman Scattering Spectra of Certain Bi-Space and Tri-Cyclic Diene Hydrocarbons

SOV/51-5-5-9/23

Raman spectra of 2,2'-dicyclopentenyl and of dicyclopentadiene were obtained using a glass "Shteynkhel'" spectrograph, as described in Refs 1, 2. The Raman spectra of 2,2'-dicyclohexenyl (Fig 1 curve v), 1,1'-dicyclohexenyl (Fig 1 curve a) and of 1,1'-dicyclopentenyl (Fig 1 curve b) were obtained using a triple-prism glass spectrograph ISP-51 with photoelectric recording. Table 2 gives the values of the Raman frequencies and intensities of all the five hydrocarbons. Reproducibility of the results was satisfactory and the differences between individual measurements of the strong lines did not exceed ± 3% (see Fig 2). The results obtained are discussed and interpreted in detail. As part of the discussion the authors quote the C=C frequencies and intensities of various dienes with isolated and conjugated double bonds (Table 3). There are 2 figures, 3 tables and 12 references, 11 of which are Soviet and 1 German.

SUBMITTED: December 31, 1957

Card 2/2 1. Hydrocarbons--Spectra 2. Roman spectroscopy 3. Spectrophotometers --Performance

LEVINA, R.Ya.; SHABAROV, Yu.S.; SHANAZAROV, K.S.; TRESHCHOVA, Ye.G.

Synthesis of hydrocarbons. Part 63: Arylcyclopropanes. Vest. Mosk. un. Ser. mat., mekh., astron., fiz. khim., 12 no.5:145-150 '57. (MIRA 11:9)

1.Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta.
(Cyclopropane)

KHROMOV, S.I.; RADZHABLI-SEIDOVA, N.A.; TRESHCHOVA, Ye.G.; KAZANSKIY, B.A.

Contact conversions of 1-methyl-1-phenylcyclohexane and phenylcyclohexane in the presence of aluminosilicate catalysts. Vest. Mosk. un. Ser. mat., mekh., astron., fiz. khim., 12 no.5:171-176 '57. (MIRA 11:9)

1.Kafedra khimii nefti Moskovskogo gosudarstvennogo universiteta.
(Cyclohexane) (Catalysts)

SOV/20-121-2-30/53

AUTHORS: Levina, R. Ya., Shabarov, Yu. S., Kuzmin, M. G., Vasil'yev, N. I., Treshchova, Ye. G.

TITLE: A New Method of the Production of Cyclobutane Hydrocarbons (Novyy metod sinteza tsiklobutanovykh uglevodorodov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 303 - 306 (USSR)

ABSTRACT: Shortly the authors wrote about the possibility of a synthesis as mentioned in the title by means of the decomposition of tetra-hydro-pyridazine (Ref 1). In the present paper they investigate this reaction by means of some examples. The last mentioned initial substances are 6-membered analogs of pyrazolines. In the case of their heating in the presence of caustic potash and platinum they decompose under the separation of nitrogen and a formation of cyclobutane hydrocarbons. It showed that the biradicals III forming as intermediates not only do not cyclize but even cleave under the formation of ethylene hydrocarbons. The quantitative ratio between the aryl-cyclobutane formed and the corresponding styrene can be

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classified according to the ratio between the quantity of nitrogen and that of ethylene separated in the decomposition of the initial monoaryl-tetra-hydro-pyridazine (IIa in IIb). Thus the authors were the first to succeed in extending the range of application of the classical Kizhner reaction which hitherto has been regarded only of use in the synthesis of cyclopropane hydrocarbons. This way the authors synthetized the hitherto not described p-tolyl cyclobutane and 1,2-diphenyl cyclobutane. In an earlier paper (Ref 3) the authors proved that in phenyl cyclopropane there exists a conjugation between the benzene nucleus and the 3-membered cycle. The comparison of the intensities of some of the most intensive frequencies (characteristic of the benzene ring) in the spectra of the combination dispersion of phenyl cyclobutane with the intensities of corresponding frequencies in the spectra of the propenyl benzene, phenyl cyclopropane on the one hand and alkyl benzenes on the other hand proved that the monosubstituted aromatic hydrocarbons are arranged in a series as follows: propenyl benzene > phenyl cyclopropane > phenyl cyclobutane > isopropyl benzene (Table 1).

 The same frequencies in the spectrum of p-tolyl cyclobutane

A New Method of the Production of Cyclobutane Hydrocarbons

have far higher intensities than in the spectrum of p-methyl-ethyl benzene. This fact proves the existing conjugation between the benzene ring and the 4-membered nucleus.
There are 1 table and 12 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: February 27, 1958, by A. N. Nesmeyanov, Member, Academy of Sciences, USSR

SUBMITTED: February 26, 1958

TRESHCHOVA, Ye.G.

TUROVA-POLYAK, M.B.; KRAYTS, Z.S.; TRESHCHOVA, Ye.G.

Isomerization of polymethylene hydrocarbons under the influence of aluminum chloride. Part 19: Isomerization of 1,3,5, n-trimethylcyclohexane and isopropylcyclohexane. Zhur. ob. khim. 26 no.10:2732-2738 O '56. (MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Isomerization) (Cyclohexane)

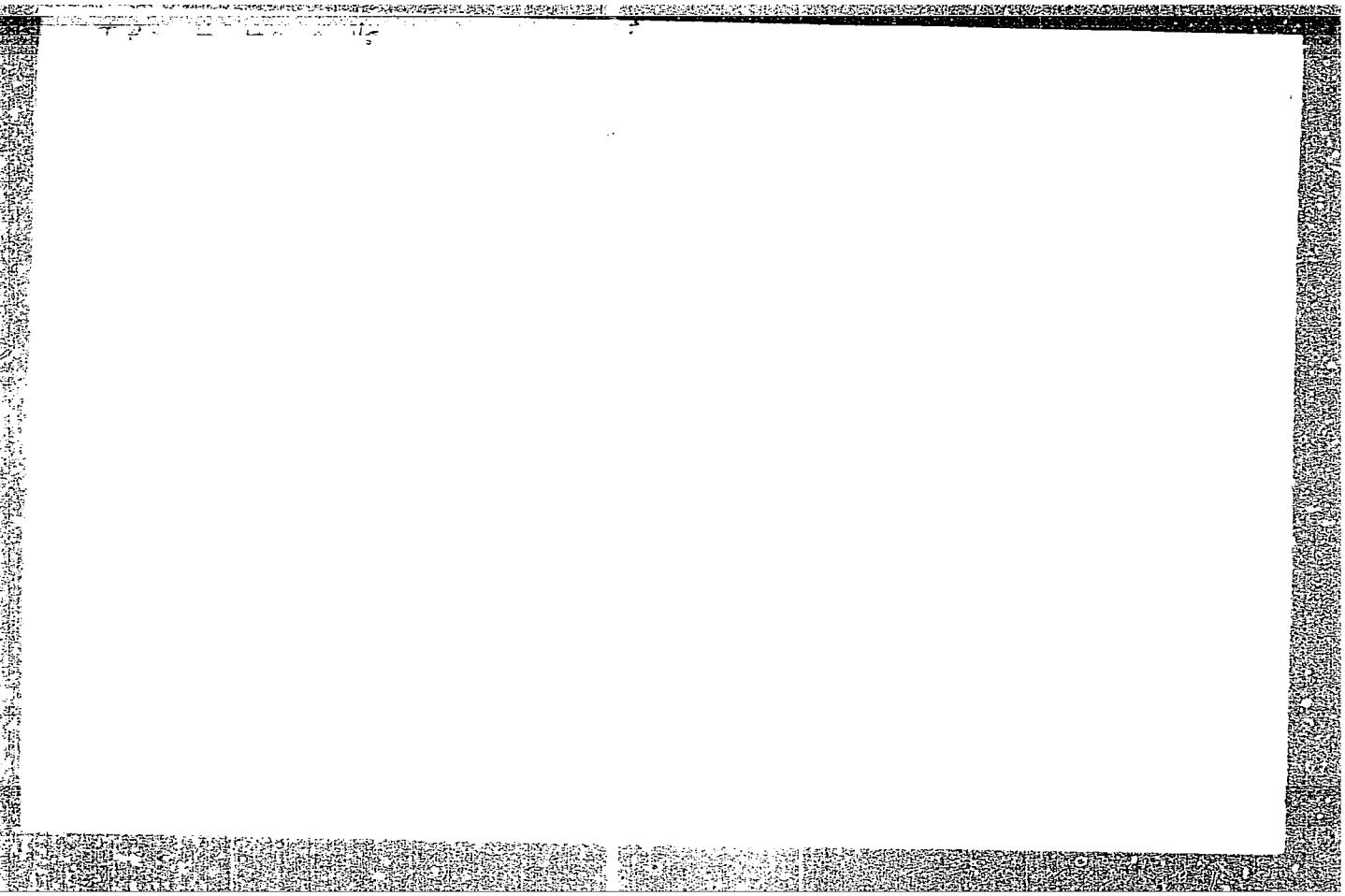
(Treshchova, Ye.G.

LEVINA, R.Ya.; KAYKARIS, P.A.; TRESHCHOVA, Ye.G.

Synthesis of hydrocarbons. Part 62: Synthesis of alkenes and alkanes of a branched structure. Vest.Mosk.un.Ser.mat.,mekh., astron.,fiz., khim. 12 no.3:165-168 '57. (MIRA 11:3)

1.Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta.

(Paraffins) (Olefins)



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APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R001756520017-7"

RYCHIN, Sergey Aleksandrovich; PALLER, A.M., retsenzent; TRESHKOV, K.G., retsenzent; MAKSIMOV, A.M., nauchn. red.; PENOVA, Ye.M., red.

[Pneumatic tools in shipbuilding] Pnevmaticheskie instrumenty v sudostroenii. Leningrad, Izd-vo "Sudostroenie," 1964. 220 p. (MIRA 17:4)

TRESHNIKOV, Aleksey Fedorovich; OFINA, V. redaktor; VOLKOVA, Ye., tekhnicheskiy redaktor

[On the New Siberian Islands; history of an expedition.] Na Novosibirskikh ostrovakh; istoriia odnoi ekspeditsii, Moskva, Izd-vo "Morskoi transport," 1955. 116 p. (MLRA 8:8)
(New Siberian Islands)

TRESHNIKOV, Aleksey Fedorovich, Geroy Sotsialisticheskogo Truda, kandidat geograficheskikh nauk; TOLSTIKOV, Yevgeniy Ivanovich, Geroy Sovetskogo Soyuza, kandidat geograficheskikh nauk; USPENSKAYA, N.V., redaktor; ISLANT'YEVA, P.G., tekhnicheskiy redaktor

[Drifting stations in the Mid-Arctic "North Pole-3" and North Pole-4"] Dreifuiushchie stantsii v TSentral'noi Arktike "Severnyi polius-3" i "Severnyi polius-4." Moskva, Izd-vo "Znanie," 1956. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser. 3, no.24) (MLRA 9:7)
(Arctic regions)

TRESHNIKOV, Aleksey Fedorovich; OFINA, V.I., redaktor; TIKHONOVA, Ye.A., tekhnicheskiy redaktor

[A year on an ice floe; the diary of a polar explorer] God na l'dine; iz dnevnika poliarnika. Moskva, Izd-vo "Morskoy transport," 1956. 92 p. (MLRA 9:9)
(Arctic regions)

TRESHNIKOV, A.F.

Soviet research in the Antarctic during 1957. Izv. AN SSSR.Ser. geog. no.6:139-140 N-D '56. (MLRA 10:1)
(Antarctic regions)

TRESHNIKOV, Aleksey Fedorovich; PASETSKIY, Vasiliy Mikhaylovich; PROKHODTSEVA, S.Ya., redaktor; VILENSKAYA, E.N., tekhnicheskiy redaktor

[Salomon Andrée] Solomon Andre. Moskva, Gos.izd-vo geogr. lit-ry, 1957. 45 p. (MLRA 10:8)
(Andrée, Salomon August, 1854-1897)

TRESHNIKOV, A.F., kand.geograf.nauk

Recent data on elevations of the eastern Antarctic. Inform.biul. Sov.antark.eksp. no.1:17-20 '58. (MIRA 12:8)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Antarctic regions--Altitudes)

80574
SOV/169-59-4-3233

3.9000
Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 4, p 5 (USSR)

AUTHOR: Treshnikov, A.F.

TITLE: Some Features of the Ice Conditions in the Davis Sea

PERIODICAL: Inform. byul. Sov. antarkt. ekspeditsii, 1958, Nr 1, pp 61-63

ABSTRACT: Soviet investigators carry out in the Antarctic systematic observations of the ice distribution in the Davis Sea by monthly ice surveys by aircraft. It was detected that the ice conditions most suitable for the navigation of ships in the Davis Sea appear from mid January to mid March. The serious obstacle for approaching ships is caused by the land floe when the antarctic summer begins. The position of the northern boundary of the floating ice almost does not vary in May and June, in July the boundary moves northwards, and remains until mid December near 60° S.lat. In winter, the sea is covered always by young ice beyond the boundary of land floe to the

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Some Features of the Ice Conditions in the Davis Sea

Drigal'skiy island and the northern end of the Shackleton glacier. In the northern part beyond the zone of young ice, fragments of ice pack of the fields are found with a firmness of 9 - 10 points, and further to north, gray and white-gray ices in large pieces predominate having a firmness of 9 - 10 points.

A.N.O.

Card 2/2

TRESHNIKOV, A.F.

International relations of the Second Continental Antarctic Expedition. Inform.biul.Sov.antark.eksp. no.1:83-87 '58. (MIRA 12:8)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut, nachal'nik Vtoroy antarkticheskoy ekspeditsii. (Antarctic regions)

TRESHNIKOV, A. F.

Soviet expedition to the Antarctic (1956/1957). Probl.Arkt. no.3: 121-124 '58. (MIRA 12:1)
(Antarctic regions)

TRESHNIKOV, A., geroy Sotsialisticheskogo Truda

Some results of Soviet scientific investigations in Antarctica. (MIRA 12:1)
Mor. flot 18 no.12:22-24 D '58.

1. Nachal'nik Vtoroy kontinental'noy antarkticheskoy ekspeditsii.
(Antarctic regions)

TRESHNIKOV, A. F.

"The Oceanography of the Central Arctic."
report to be submitted for the Intl. Oceanographic Cong. New York City.
31 Aug - 11 Sep 1959.

(Arctic and Antarctic Res. Inst. Leningrad)

TRESHNIKOV, A.F.

PHASE I BOOK EXPLOITATION SOV/4149

Leningrad. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut

Problemy Arktiki; sbornik statey, vyp. 7 (Problems of the Arctic; Collection of Articles, No. 7) Leningrad, Izd-vo "Morskoy transport," 1959. 135 p. 500 copies printed. XEROX COPY

Additional Sponsoring Agency: USSR. Ministerstvo morskogo flota.

Resp. Ed.: V.V. Frolov; Editorial Board: L.L. Balakshin, A.A. Girs, P.A. Gordiyenko (Deputy Resp. Ed.), I.M. Dolgin, L.G. Kaplinskaya, A.A. Kirillov, Ye.S. Korotkevich, V.V. Lavrov, I.V. Maksimov, A.I. Ol', I.I. Poznyak, and B.V. Felisov; Tech: L.P. Drozhzhina.

PURPOSE: The publication is intended for geographers, oceanographers, and particularly for all those interested in the studies of Arctic and Antarctic regions.

COVERAGE: This collection of 19 articles is the seventh of a series of publications dealing with problems of the Arctic and Antarctic. The articles deal mainly with the characteristics of water in the Barents Sea, hydrological conditions in the estuaries of Siberian rivers, types of atmospheric circulation in the Arctic,

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Problems of the Arctic (Cont.) SOV/4149

distribution of the hydrological stations in the Soviet Arctic, magnetic storms and their effect on radio communications. Included is brief information on Soviet meteorological and oceanographical expeditions. References accompany most of the articles. No personalities are mentioned.

TABLE OF CONTENTS:

Card 2/5

TRESHNIKOV, Aleksey Fedorovich, polyarnik, Geroy Sotsialisticheskogo Truda; GRIGOR'YEV, G.K., red.; KOSHELEVA, S.M., tekhn.red.

[Icebound] Zakovannyi v led. Moskva, Gos.izd-vo geogr.lit-ry, 1959. 212 p. (MIRA 12:7)

1. Nachal'nik Vtoroy kontinental'noy antarkticheskoy ekspeditsii 1956-1957 gg. (for Treshnikov).
(Antarctic regions)

TRESHNIKOV, A.F.

3(3) P.Y PHASE I BOOK EXPLOITATION SOV/3223

Akademiya nauk SSSR. Kompleksnaya antarkticheskaya ekspeditsiya

Klimat Antarktiki (Climate of the Antarctic) Moscow, Geografgiz, 1959. 285 p. (Series: Its: Trudy; Meteorologiya i klimatologiya) Errata slip inserted. 4,000 copies printed.

Ed.: S. N. Kumkes; Tech. Ed.: S. M. Kosheleva; Editorial Board: V. F. Burkhanov, B. L. Dzerdzeyevskiy, Kh. P. Pogosyan, and G. M. Tauber.

PURPOSE: This book is intended for meteorologists and climatologists. It will be of interest to all earth scientists concerned with the Antarctic region.

COVERAGE: This book contains 18 articles on the weather and climate of Antarctica. Articles represent the generalized results of processing data obtained by the Soviets during their expeditions to the Antarctic, 1955-1958. Individual authors have attempted to clarify and unify previously divergent views on Antarctic

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Climate of the Antarctic (Cont.) SOV/3223

meteorological processes (zonal circulation, temperature distributions, cyclonic and anticyclonic movement, etc.). No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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TRESHNIKOV, A.F.

Soviet Antarctic research in 1959. Inform. biul. Sov. antark. eksp. no.4:5-8 '59. (MIRA 12:11)

1. Nachal'nik Antarkticheskogo otdeleniya Arkticheskogo i antarkticheskogo nauchno-issledovatel'skogo instituta.
(Antarctic regions)

SOMOV, M.M., otv. red.; MAKSIMOV, I.V., zamestitel' otv.red.; TREShNIKOV, A.F., zamestitel' otv.red.; ANDRIYASHEV, A.P., red.; BUYNITSKIY, V.Kh., red.; VORONOV, P.S., red.; DOLGIN, I.M., red.; KALESNIK, S.V., red.; KOROTKEVICH, Ye.S., red.; NIKOL'SKIY, A.P., red.; RAVICH, M.G., red.; TAUBER, G.M., red.; FROLOV, V.V., red.; SLEVICH, S.B., red.; KAPLINSKAYA, L.G., red.izd-va; DROZHZHINA, L.P., tekhn.red.

[Report on observations completed by the Soviet Antarctic Expedition in 1957 and 1958] Otchet o nabliudeniiakh, vypolnennykh Sovetskoi antarkticheskoi ekspeditsiei v 1957 i 1958 gg. Sovetskaia antarkticheskaia ekspeditsiia, 1955-1958. Leningrad, Izd-vo "Morskoi transport," 1960. 39 p (Informatsionnyi biulletin', no.15) (MIRA 13:6)

(Antarctic regions--Russian exploration)

TRESHNIKOV, Aleksey Fedorovich, kand.geograf.nauk. Prinimali uchastiye: MATVEYCHUK, Georgiy Ivanovich; CHUPIN, Nikolay Petrovich; ARALOV, Dmitriy Petrovich; TIKHOMIROV, Igor' Ivanovich, vrach-stomatolog; MANSUROV, Sergey Mikhaylovich; KRICHAK, Oskar Grigor'yevich, kand. geograf.nauk; SHUMSKIY, Petr Aleksandrovich, doktor geograf.nauk; SHESTERIKOV, Nikolay Pavlovich, mladshiy nauchnyy sotrudnik, gidrolog. DROZHZHINA, L.P., tekhn.red.

[Second Continental Expedition, 1956-1958; general description] Vtoraia kontinental'naia ekspeditsiia, 1956-1958 gg.; obshchee opisanie. Pod red. A.F.Treshnikova. Leningrad, Izd-vo "Morskoi transport," 1960. 205 p. (Sovetskaia antarkticheskaia ekspeditsiia, no.8). (MIRA 13:7)

1. Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. 2. Nachal'nik Vtoroy kontinental'noy ekspeditsii (for Treshnikov). 3. Zamestitel' nachal'nika Vtoroy kontinental'noy ekspeditsii po administrativno-khozyaystvennoy chasti; nachal'nik beregovoy bazy (for Matveychuk).

(Continued on next card)

TRESHNIKOV, Aleksey Fedorovich ---(continued) Card 2.
4. Glavnyy inzhener Vtoroy kontinental'noy ekspeditsii (for Chupin). 5. Nachal'nik otryada svyazi i radionavigatsii Vtoroy kontinental'noy ekspeditsii (for Aralov). 6. Starshiy vrach Vtoroy kontinental'noy ekspeditsii (for Tikhomirov). 7. Nachal'nik geofizicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Mansurov). 8. Nachal'nik aerometeorologicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Krichak). 9. Nachal'nik glyatsiologicheskogo i vnutrikontinental'nogo otryada Vtoroy kontinental'noy ekspeditsii. 10. Nachal'nik otryada pribrezhnoy gidrologii Vtoroy kontinental'noy ekspeditsii (for Shesterikov).
(Antarctic regions--Russian exploration)

TRESHNIKOV, A.F., kand. geogr. nauk, red.; KAPLINSKAYA, L.G., red.; KOTLYAKOVA, O.I., tekhn. red.

[Materials of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955-. Leningrad, Izd-vo "Morskoi transport." Vol.9. [Second Continental Expedition, 1956-1958; scientific results] Vtoraia kontinental'naia ekspeditsiia, 1956-1958 gg; nauchnye rezul'taty. Pod red. A.F.Treshnikova. 1960. 232 p. (MIRA 14:12)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
(Antarctic regions--Geophysical research)

S/169/61/000/008/001/053
A006/A101

AUTHOR: Treshnikov, A. F.

TITLE: Soviet explorations in the Antarctic

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 8, 1961, 1, abstract 8A8 (V sb. "Probl. Arktiki i Antarktiki" no. 4, Leningrad, "Morsk. transport", 1960, 15-25)

TEXT: Brief information is given on the history of preparing for the IGY. Members of the first Soviet expedition constructed at the beginning of 1956 the Mirnyy observatory on the Davis-Sea coast. Investigations were started of the glacier, the atmosphere, the geomagnetic field, oscillations of the earth crust, telluric currents, and cosmic radiation. A sledge-tractor expedition was made and at 375 km to the south of Mirnyy, the first intracontinental station, Pionerskaya, was founded. The Vostok-1, Komsomol'skaya, Vostok, and Sovetskaya stations were established. Expeditions were made to the pole of relative inaccessibility and to the south geographical pole. The Lazarev station was organized. Great achievements were accomplished by the teams in the coastal zone. Numerous flights were made over the continent, during which the heights

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of the glacier dome were determined. During the sledge-tractor expeditions into regions unexplored until the present (over 22,000 km were covered) the thickness of the ice cover was measured. Antarctic expedition vessels carried out over 500 deep-water oceanographical observations together with geological, hydrobiological, hydrographical and glacial observations. Presently the assertion is sufficiently well founded that underneath the ice cover of the Eastern Antarctic there is a continent, whose area is, however, considerably smaller than that of the ice cover. The average thickness of the Antarctic ice cover is over 2,000 m. The ice cover is mainly fed by cyclonic precipitates. The main process causing the transformation of the snow cover into ice is the packing under the pressure of layers precipitated on the top. The average annual temperature of the ice cover surface drops at a remoter distance from the sea coast and with greater altitude attaining -60°C at the center. Four basic climatic zones are singled out: the Antarctic plateau, the glacier slope, the coast, and drifting ice. The lowest temperatures on the earth (-87.4°C) were observed at the Vostok station. As radio-sounding observations have shown, a relatively thin layer of very cold air is formed over the glacier. This cold layer descends along the glacier slope in the form of run-off wind, which prevails on the Eastern Antarctic coast. An analysis of actinometric data has shown that due to the great

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number of bright days and high clarity the level of solar radiation is very high in the Antarctic during the summer months. In the Mirnyy region an unusual localization in the variations of the terrestrial magnetic field was detected. This is explained by the abnormally high density of electric currents on the sea-coast border induced by the magnetic field of electric currents in the ionosphere.

N. Glindzich

[Abstracter's note: Complete translation]

Card 3/3

TRESHNIKOV, A.F., kand.geograf.nauk

The Fifth Antarctic Expedition. Inform biul. Sov. antark. eksp. no.16:5-6 '60. (MIRA 13:12)

1. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut.

(Antarctic regions—Russian exploration)

TRESHNIKOV, A.F.

Exploration of polar countries during the first seven-year period. Probl. Arkt. i Antarkt. no.8:5-9 '61. (MIRA 15:3)
(Arctic regions--Russian exploration)
(Antarctic regions--Russian exploration)

B/169/63/000/005/005/042
D263/D307

AUTHORS: Dolgin, I.M., Laykhtman, D.L., Rusin, N.P. and Treshnikov, A.F.

TITLE: Results of meteorological observations in the Arctic and in Antarctica

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1963, 5, abstract 5A10 (Tr. Vses. nauchn. meteorol. soveshchaniya. T.1. L., Gidrometeoizdat, 1962, 58-71)

TEXT: Apart from a short history of the development of meteorological observations in the Arctic and later in the Antarctic, the author compares regularities in meteorological phenomena in the 2 polar regions. In the coldest parts of the Arctic and the Antarctic the mean annual temperatures are respectively -20 and -55°C, and the absolute minimum temperatures are -50 and -90°C. Temperature of the coastal areas of Antarctica are close to the temperatures of the central Arctic. In central Antarctica the air temperature is 30-40°C lower than in the Arctic, both in the summer and in winter. The mean annual temperature of the free atmosphere up to 16 km is

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however only ~ 5-10°C lower over the Antarctic. Stratospheric temperature of both regions compared is almost the same in the summer, and in winter the Arctic stratosphere is 5-15°C warmer. To characterize the effects of advection it is necessary to note that the annual variation of the troposphere over the Arctic is considerably greater than over the Antarctic. The reverse is true of the stratosphere. Wind directions in both regions are illustrated by mean annual graphs of wind directions. In the Antarctic, owing to the peculiarities of the relief of the continent, wind direction is highly constant. Western directions predominate in the Arctic, and eastern in the Antarctic. Mean annual wind velocities are 10-20 m/sec in the Antarctic, and 3-5 m/sec in the Arctic. Maximum wind velocities reach 90 in the Antarctic and 40 m/sec in the Arctic, and near the tropopause in both polar regions the velocity maximum is clearly expressed as 15-20 m/sec. The Arctic may be schematically considered as an ocean surrounded by land, and the Antarctic as a continent by an ocean. According to considerations adduced in the paper, this may explain the peculiarities of the meteorological conditions in the two regions, both in summer and in the winter.

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On the basis of considerations of the radiation regimes, turbulent thermal currents, heat losses due to evaporation, and heat exchange of the active surface with lower layers, the authors show that, in contrast to atmospheres over middle and southern latitudes, polar atmospheres lose heat to the rest of the globe. Polar atmosphere is therefore a cold reservoir for the overall atmosphere. A sufficiently large amount of experimental data has already been collected regarding the problem of the 'iciness of the Arctic basin'; these data are of particular interest for the USSR. The following may specially be mentioned: (1) About 90% of the area of the Arctic basin is covered by ice, and in the summer ice covers 10-30% of the surface of the seas surrounding the Arctic. (2) It may be proposed that there is a certain critical thickness of ice, which decreases from N to S, for which thawing and freezing is balanced over the year. According to arguments put forward by the authors: (1) Results of meteorological observatories in polar regions helped in the solutions of such important national economy problems as ensuring of travel by sea or air, and growth of economical development of the extreme northern territories. (2) Daily variations of meteorological

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Results of meteorological ...

elements are practically nonexistent in polar regions, so that the latter may be regarded as vast natural laboratories for the study of atmospheric processes under most favorable conditions. (3) To solve the current problems of polar meteorology it is necessary to increase the complex of meteorological observations by a considerable amount, increase their true accuracy, and to develop in every way the theoretical foundations of polar studies. Numerical methods of weather forecasting in particular may apparently be used in these regions with greatest success.
[Abstracter's note: Complete translation]

Card 4/4

TRESHNIKOV, A.F.

Relief map of the Antarctic. Probl.Arkt. i Antakt. no.10:5-9 '62. (MIRA 16:2)

(Antarctic regions—Maps) (Relief maps)

TRESHNIKOV, A.F.; GORDIYENKO, P.A., red.; KHRUSTALEVA, N.K., red.; KOTLYAKOVA, O.I., tekhn. red.

[Transactions of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii. Leningrad, Izd-vo "Morskoi transport." Vol.21 [Characteristics of the ice conditions in the southern part of the Arctic Ocean] Osobennosti ledovogo rezhima IUzhnogo Ledovitogo okeana. 1963. 237 p. (MIRA 16:12)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955.
(Arctic Ocean--Ice)

TRESHNIKOV, Aleksey Fedorovich; KUMKES, S.N., red.; CHERNYKH, M.P., mladshiy red.; KISELEVA, Z.A., red. kart; KOSHELEVA, S.M., tekhn. red.

[History of the discovery and exploration of Antarctica] Istoriia otkrytiia i issledovaniia Antarktidy. Moskva, Geografgiz, 1963. 430 p. (MIRA 16:5)

(Antarctic regions)

TRESHNIKOV, A.F., kand. geogr. nauk

[Transactions of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii. Leningrad, Izd-vo "Morskoi transport." Vol.8. [Second continental Expedition, 1956-1958; general description] Vtoraia kontinental'naia ekspeditsiia, 1956-1958 gg., obshchee opisanie. Pod red. A.F.Treshnikova. 1960. 205 p. (MIRA 17:6)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
2. Nachal'nik Vtoroy kontinental'noy ekspeditsii.

TEESHNIKOV, A.F.

Scientific explorations of the Arctic and Antarctic Institute in 1963. Probl. Arkt. i Antarkt. no.18:5-10 '64.
(MIRA 18:3)

TRESHNIKOV, A.F., doktor geograf.nauk

Circulation of the surface waters of the Antarctic Ocean. Inform. biul. Sov. antark. eksp. no.45:5-8 '64.

(MIRA 18:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

TRUSHNIKOV, A.F.

[illegible] Dmitrievich Papanin, 1894- ; on his 70th birthday. Probl. Arkt. i Antark. no.20:5-10 '65. (MIRA 18:10)

PASETSKIY, V.M., kand. ist. nauk; TRESHNIKOV, A.F., doktor geogr. nauk, otv. red.; BOYKOVA, A.G., red.; ZEL'MANOVA, L.A., red.; RUSAKOVA, G.Ya., red.

[Twelve exploits] Dvenadtsat' podvigov. Leningrad, Gidrometeor. izd-vo, 1965. 320 p. (MIRA 18:10)

ACC NR: AT6035115 (N) SOURCE CODE: UR/2561/66/000/022/0018/0034

AUTHOR: Treshnikov, A. F.; Maksimov, I. V.; Gindysh, B. V.

ORG: None

TITLE: The Great Eastern Drift in the Southern Ocean

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Problemy Arktiki i Antarktiki, no. 22, 1966, 18-34

TOPIC TAGS: ocean current, ocean dynamics, ocean tide, oceanography, oceanographic expedition

ABSTRACT: An attempt is made to generalize the rather extensive mass of materials covering all basic observations on the eastern drift made in the Southern Ocean between 1901 and 1960. The "average station," and the dynamic method with respect to the "zero surface," calculated for the Southern Ocean by A. Defant, was used to process the results of the observations. Charts and tables are presented. The end result is the important, but not unexpected, conclusion that the Great Eastern Drift causes a flow of Atlantic waters into the Pacific, and that one can assume the existence of a general meridional water circulation in a circle through the Atlantic, Southern, Pacific, and Arctic oceans. The role of this circulation in the global heat exchange occurring in the world ocean is not clear, nor is the reason for this

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ACC NR: AT6035115

movement of ocean water. However, it is believed that Southern Ocean waters have no real effect on heat transfer and water circulation in the Atlantic, but they should be expected to affect Pacific Ocean water because of the Great Eastern Drift. Orig. art. has: 10 figures and 6 tables.

SUB CODE: 08/SUBM DATE: 24Jun65/ORIG REF: 007/OTH REF: 002

Card 2/2

ACC NR: AR7004096 (N) SOURCE CODE: UR/0169/66/000/012/V012/V012

AUTHOR: Treshnikov, A. F.

TITLE: Water circulation and ice drift in the Antarctic Ocean

SOURCE: Ref. zh. Geofizika, Abs. 12V78

REF SOURCE: Sb. 2-y Mezhdunar. okeanogr. kongress, 1966. Tezisy dokl. M., Nauka, 1966, 377-378

TOPIC TAGS: ocean dynamics, sea ice, hydrographic survey, atmospheric circulation / Antarctica, Antarctic Ocean

ABSTRACT: In the coastal regions surrounding the Antarctic Continent (Antarctica) a system of cyclonic oceanic circulations exists which carries water and ice northward, away from the shore; there the ice soon melts and the waters join the Eastern Circumpolar Current. At the point where the cold Antarctic waters meet the relatively warm waters of the Eastern Circumpolar Current a sharp increase in the horizontal temperature gradient occurs. This convergence

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ACC NR: AR7004096

zone is sharply defined. As the two bodies of water move eastward, the waters mix and the gradient disappears. In a number of places branch currents break away from the main body of the Eastern Circumpolar Current and flow south toward the Antarctic Continent, moving from east to west along the coast and completing the circulation cycle. It appears that divergence zones arise where the southbound currents issue and separate from the Eastern Circumpolar Current. Thus, meridional circulation is found to predominate in the coastal regions of the Antarctic Ocean, producing a vigorous exchange between coastal waters and the Eastern Circumpolar Current. Ice floes and icebergs are carried out to sea from the coast by northern branches of cyclonic circulation. This explains the relatively rapid elimination of ice from some parts of the coastal waters in the summer. Such a conception of oceanic circulation and ice drifts in the Antarctic Ocean agrees well with prevailing notions on atmospheric circulation. [SP]
[Translation of abstract]

SUB CODE: 08, 04

Card 2/2

TRESIGLAVIC, D.

Yugoslavia (430)

Agriculture -- Plant & Animal Industry

Fungus Endothia parasitica, a menace to the European chestnut in Yugoslavia. p. 3, Narodni Sumar, Vol. 5, no. 1, January 1951.

East European Accessions List, Library of Congress, Vol. 2, No. 4, April 1953. UNCLASSIFIED.

TRESKA, Ll.

How the cutting of forests should be done, p. 25, PER BUJQESINE SOCIALISTE, (Ministrie e Bujqesise) Tirane. Vol. 10, No. 6, June 1956

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 5, No. 12, December 1956

TRESKA, Vaclav

Examination of lubricant consumption in the machine industry. Ropa a uhlie 6 no. 6:169-172 Je '64.

1. Benzina National Enterprise, Department of Lubrication and Fuels.

TICHÁ, Vaclav

Lubrication of cams and valve lifters. Ropa a uhlie 6 no.2: 58-59 F '64.

Effect of additions in lubricating greases. Ropa a uhlie 6 no.2: 59-60 F '64.

TRESKA, V.

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TRESKIN, L.N., polkovnik.

In the Russian Corps (continuation). Nashi vesti 9 no.26:4-6 Mr '53. (MIRA 7:9)
(Yugoslavia--World War, 1939-1945) (World War, 1939-1945--Yugoslavia)

TRESKIN, L.N., polkovnik.

In the Russian Corps (continuation). Nashi vesti no.73:5-6 F'55. (MLRA 8:3)

(Yugoslavia--World War, 1939-1945)

TRESKIN, L.N., polkovnik.

In the Russian Corps (continuation). Nashi vesti no.62:4-6 S '54.
(Yugoslavia--World War, 1939-1945) (MLRA 8:1)

TRESKIN, L.N., polkovnik.

In the Russian Corps (continuation). Nashi vesti no. 58:10-11 Jl '54. (MLRA 7:9)
(Yugoslavia--World War, 1939-1945) (World War, 1939-1945--Yugoslavia)

TRESKIN, N.A.

Relicts of polygon ground and polygonal manifestation in the central regions of the European part of the U.S.S.R. Biul. Kom. chetv. per. no.29:168-170 '64. (MIRA 17:8)

TRESKIN, P.P.; POLEVOY, V.V.

Moose in Kiybyshev Province. Zool.zhur. 39 no.2:288-292 F '60. (MIRA 13:6)

1. Kuybyshev Agricultural Institute.
(Kuybyshev Province--Moose)
(Forest protection)

ACC NR: AP7001393 (N) SORUCE CODE: UR/0413/66/000/021/0062/0062

INVENTOR: Treskin, S. A.; Shpirnov, V. A.; Gavrilov, N. G.

ORG: none

TITLE: Method of applying a conductive metal coating on a glass-insulated microwire. Class 21, No. 187860 [announced by the Scientific Research Institute of Non-destructive Testing (Nauchno-issledovatel'skiy institut introskopii)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 62

TOPIC TAGS: microwire, glass insulated microwire, metal coated microwire, gold coated microwire, glass coating

ABSTRACT: This Author Certificate introduces a method of forming a conductive metal coating on a glass-insulated microwire. To produce good quality coating along the whole length of a wire, the later is first passed through a capillary tube filled with a chemically inert metal liquid, such as gold, and then through a furnace in which the metal is sintered to the glass. [ND]

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Card 1/1 UDC: 621.315.36

ACCESSION NR: AR4034662 S/0196/64/000/003/B005/B005

SOURCE: Ref. zh. Elektrotekhn. i energ., Abs. 3B29

AUTHOR: Treskina, M. N.

TITLE: Patterns in the characteristics of solid solutions of KCl--KBr, NaCl--NaBr alkali-halogene salts and time-variation of the characteristics. Abstract

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vy*p. 51, 1963, 280

TOPIC TAGS: alkali halogene salt, KCl KBr solid solution, NaCl NaBr solid solution, alkali halogene salt aging

TRANSLATION: Effects of solid-solution composition and of temperature upon the conductivity of KCl--KBr, NaCl--NaBr alkali-halogene salts are reported. From the conductivity data, coefficient of thermal expansion, density, and lattice parameter, there has been calculated the number of particles in the elementary crystal cell and the microhardness of the above solid solutions. The values of ionic conductivity, molecular concentration, melting temperature, coefficient of thermal expansion, and half-width of absorption F-line well agree with the vacancy density in the crystals. According to Schottky, the compounds with small additions of KCl in KBr and NaCl in NaBr have most defects. Prolonged keeping (aging) of single crystals of KCl, KBr, NaCl, NaBr and the KCl--KBr solid solution initially causes an increase in the conductivity and microhardness, and then, their slow decrease.

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ACCESSION NR: AR4034662

The slowest process of aging occurs in the solid solutions of 16 mol.% KCl in KBr and 22 mol.% NaCl in NaBr. [Tomskiy politekhnich. in-t im. S. M. Kirova]

DATE ACQ: 10Apr64 SUB CODE: IC ENCL: 00

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